



NATIONAL ENVIRONMENTAL EMERGENCIES CENTRE (NEEC)

SENSITIVITY MAPPING

The National Environmental Emergencies Centre (NEEC) protects Canadians and the environment from the effects of environmental emergencies by providing science-based expert advice and information on applicable regulations. Available 24/7, NEEC offers many services to effectively manage an environmental emergency and reduce its impacts, such as:

- providing special weather forecasts for areas affected by an emergency;
- modelling where oil spills will travel (trajectory modelling);
- providing advice about how hazardous substances behave;
- mapping environmentally sensitive areas and identifying resources at risk;
- establishing priority areas for clean-up;
- recommending effective shoreline clean-up assessment techniques; and
- providing advice about how to best protect sensitive ecosystems and wildlife like migratory birds.

SENSITIVITY MAPPING

NEEC's sensitivity maps give an overview of the environmental, socioeconomic and cultural resources in a given region that could be at risk in an environmental emergency. Emergency Responders can then use this information to help guide their decisions when responding to an emergency.

CATEGORIES OF RESOURCES INCLUDED FOR SENSITIVITY MAPPING

BIOLOGICAL RESOURCES

- Legally protected conservation areas
- Fauna or flora species with a legal status, such as Species at Risk, Endangered, Threatened or Species of Special Concern
- Fish, marine mammal or bird habitat associated with vulnerable life stages and activities (e.g. spawning or breeding, foraging, congregating)
- Ecologically important habitats (e.g. eelgrass beds and wetlands)

SOCIO-ECONOMIC RESOURCES

- Regulated economic activities (e.g. extraction, transportation, storage, disposal)
- Vulnerable economic activities (e.g. aquaculture, fisheries)
- Shellfish areas (e.g. growing, harvesting, closures, aquaculture)
- Cultural activities (e.g. areas of cultural importance or sustaining livelihoods)
- Recreational activities (e.g. coastal campsites, recreational fisheries)

LOCAL TRADITIONAL KNOWLEDGE

- Indigenous Nations' lands and contact information
- Areas of importance (cultural, historical, spiritual, educational)
- Economic activities (e.g. sustaining livelihood, resource management)

PHYSICAL ENVIRONMENT

- Physical characteristics and conditions that affect response operations
- Characteristics of the shoreline and coastal environment
- Characteristics of the seafloor

OPERATIONAL (RESPONSE) RESOURCES

- Resources required to effectively respond
- Agreements, plans, preferred strategies and tactics
- Supporting infrastructure (e.g. boat launch, port infrastructure, airfields, helipads)
- Hazards (e.g. hazardous materials, hydrological obstacles)

CONTRIBUTING INFORMATION FOR SENSITIVITY MAPPING

NEEC continuously welcomes new information to expand its database to better inform preparedness and response to environmental emergencies. NEEC gathers this information from federal, provincial, territorial, municipal and community sources. NEEC also gathers Traditional Ecological Knowledge (TEK) to improve these geospatial maps. Responders use TEK to identify:

- habitat where species can be found or "hotspots" with high concentration of species;
- species population levels and fluctuations;
- ways to avoid or lessen the impacts of an emergency; and
- baseline data to assist with restoration strategies.



FOR MORE INFORMATION ON THE NEEC

www.canada.ca/en/environment-climate-change/services/environmental-emergencies-program/national-centre.html

FOR MORE INFORMATION ON SENSITIVITY MAPPING,

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Cat. No.: En4-321/2018E-PDF
ISBN: 978-0-660-25585-9

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Photos: Shoreline Aerial Surveys © Sonia Laforest

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